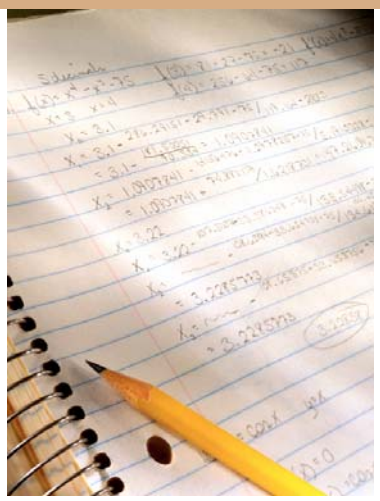
# NAEP 2005 Mathematics Report for Utah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This report provides selected results from the National Assessment of Educational Progress (NAEP) for Utah's public school students at grades 4 and 8. Beginning in 1990, mathematics has been assessed in six different years at the state level (at grade 8 in 1990, and at both grades 4 and 8 in 1992, 1996, 2000, 2003, and 2005).

NAEP is the only nationally representative and continuing assessment that demonstrates what America's students know and can do in various subject areas. NAEP first started tracking national performance in 1969. Beginning in 1992, NAEP conducted assessments for the individual states. A key role of State-by-State NAEP is assisting in evaluating the conditions and progress of student achievement at grades four and eight. The advantage of NAEP is that it allows comparison of results from one state with those of another, or with results for the rest of the nation. NAEP provides a line of evidence for states that can help answer such questions as: How are we doing on student achievement over time? How does our trends compare to the nation over time?

NAEP is a project of the National Center for Education Statistics (NCES). For more information about the assessment, see *The Nation's Report Card, Mathematics 2005,* which is available on the NAEP website along with the full set of national and state results in an interactive database (http://nces.ed.gov/nationsreportcard/). Released test questions, scoring guides, and question-level performance data are also available on the website.

# K E Y  F I N D I N G S  F O R  2 0 0 5

## Grade 4:

- The average mathematics score for students in Utah was 239. This was higher than that in 1992 (224) and was higher than that in 2003 (235).
- Utah's average score (239) was higher than that of the nation's public schools (237).
- The percentage of students in Utah who performed at or above *Proficient* was 37 percent. This was greater than that in 1992 (19 percent) and was greater than that in 2003 (31 percent).
- In Utah, the percentage of students who performed at or above *Proficient* was not significantly different from that for the nation's public schools (35 percent).
- The percentage of students in Utah who performed at or above *Basic* was 83 percent. This was greater than that in 1992 (66 percent) and was greater than that in 2003 (79 percent).
- In Utah, the percentage of students who performed at or above *Basic* was greater than that for the nation's public schools (79 percent).

## Grade 8:

- The average mathematics score for students in Utah was 279. This was higher than that in 1992 (274) and was not significantly different from that in 2003 (281).
- Utah's average score (279) was higher than that of the nation's public schools (278).
- The percentage of students in Utah who performed at or above *Proficient* was 30 percent. This was greater than that in 1992 (22 percent) and was not significantly different from that in 2003 (31 percent).
- In Utah, the percentage of students who performed at or above *Proficient* was not significantly different from that for the nation's public schools (28 percent).
- The percentage of students in Utah who performed at or above *Basic* was 71 percent. This was greater than that in 1992 (67 percent) and was not significantly different from that in 2003 (72 percent).
- In Utah, the percentage of students who performed at or above *Basic* was greater than that for the nation's public schools (68 percent).

# Introduction

## What Was Assessed?

The content for each NAEP assessment is determined by the National Assessment Governing Board (NAGB). The objectives for each NAEP assessment are described in a "framework," a document that delineates the important content and process areas to be measured, as well as the types of questions to be included on the assessment. In 2000, NAGB awarded a contract to the Council of Chief State School Officers (CCSSO) to update the mathematics assessment framework for 2005. CCSSO established a steering committee, representative of national policy organizations, mathematics associations, research mathematicians, business and industry, and educators to develop policy recommendations for the mathematics assessment and to guide the direction and scope of the project. Care was taken to ensure that the diversity of opinion regarding mathematics issues was represented and reflected.

The mathematics framework for the 2005 National Assessment of Educational Progress is based on the frameworks that guided the 1990, 1992, 1996, 2000, and 2003 mathematics assessments. Those frameworks were developed with the guidance of the College Board and directed by NAGB. The 2005 NAEP mathematics framework calls for questions based on five mathematics content areas: number properties and operations; measurement; geometry; data analysis and probability; and algebra. The mathematics framework is available on the NAGB website (http://www.nagb.org/pubs/m_framework_05/761607-Math%20Framework.pdf).

The 2005 mathematics framework classifies test items in two dimensions—content area and mathematical complexity. Although the names of the content areas, as well as some of the topics in those areas, have changed from one framework to the next, a consistent focus has remained across frameworks on collecting information on student performance in the five content areas mentioned above. The two dimensions of mathematical ability and power in the 1996–2003 frameworks have been replaced in the 2005 framework by the dimension of mathematical complexity.

A combination of multiple-choice and constructed-response questions was used to assess students' mathematics performance. Short constructed-response questions ask students to provide the answer for a numerical problem or to briefly describe the solution to a problem. Longer constructed-response questions require students to produce both a solution and a justification, explanation, or interpretation for the solution. Released test questions, along with student performance data by state, are available on the NAEP website (http://nces.ed.gov/nationsreportcard/itmrls/).

The framework incorporates the use of calculators (four-function at grade 4 and scientific at grade 8), rulers, protractors (grade 8), and manipulatives such as spinners and geometric shapes. The use of these ancillary materials and the use of calculators were incorporated into some parts of the assessment, but not all. Calculator use was permitted on approximately one-third of the test questions.

## Who Was Assessed?

Fifty-two jurisdictions participated in NAEP in 2005: the 50 states, the District of Columbia, and the Department of Defense Education Activity Schools (domestic and overseas). The target sample for each state or other jurisdiction was approximately 100 schools at each grade tested and approximately 3,000 students for each subject at each grade, except in small or sparsely populated jurisdictions.

The sample of schools and students was chosen in a two-stage sampling process. First, the sample of schools was selected by probability sampling methods. Then, within the participating schools, random samples of students were chosen.

Beginning in 2002, the national sample was obtained by aggregating the samples from each state. The national results include the results from the states and from a sample of private schools, weighted appropriately to represent the U.S. student population. Only public schools, however, are included in the state reports.

The overall participation rates for schools and students must meet guidelines established by the National Center for Education Statistics (NCES) and the National Assessment Governing Board (NAGB) in order for assessment results to be reported publicly. Participation rates before substitution needed to be at least 80 percent for schools and at least 85 percent for students in each subject and grade.

Participation rates for the 2005 mathematics assessment are available at the NAEP website (http://nces.ed.gov/nationsreportcard/mathematics/sampledesign.asp).

## How Is Student Mathematics Performance Reported?

The results of student performance on the NAEP assessments are reported for various groups of students (e.g., fourth-grade female students or students who took the assessment in a particular year). NAEP does not produce scores for individual students, nor does it report scores for schools or for school districts. Some large urban districts, however, have voluntarily participated in the assessment on a trial basis and were sampled as states were sampled. Mathematics performance for groups of students is reported in two ways: as average scale scores and as achievement levels.

**Scale Scores**: Student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500 and is linked to the corresponding scales in 1990, 1992, 1996, 2000, and 2003. Subscales were created to reflect performance on each of the five content areas defined in the NAEP mathematics framework.

An overall composite scale was developed by weighting each of the mathematics subscales for the grade based on its relative importance in the framework. This composite scale is the metric used to present the average scale scores and selected percentiles used in NAEP reports.

**Achievement Levels**: Student performance is also reported in terms of three achievement levels—*Basic, Proficient*, and *Advanced*. Results based on achievement levels are expressed in terms of the percentage of students who attained each level. The three achievement levels are defined as follows:

- *Basic*: This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.

- *Proficient*: This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

- *Advanced*: This level signifies superior performance.

The achievement levels are cumulative. Therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level demonstrate the competencies associated with both the *Basic* and the *Proficient* levels.

The achievement levels are performance standards adopted by the National Assessment Governing Board (NAGB) as part of its statutory responsibilities mandated by Congress. The levels represent collective judgments of what students should know and be able to do for each grade tested. They are based on recommendations made by broadly representative panels of classroom teachers, education specialists, and members of the general public from throughout the United States. As provided by law, the National Center for Education Statistics (NCES), upon review of congressionally mandated evaluations of NAEP, has determined that the achievement levels are to be used on a trial basis until it is determined that they are "reasonable, valid, and informative to the public." (No Child Left Behind Act of 2001, P.L., 107-110, 115 Stat.1425 [2002]). However, both NCES and NAGB believe these performance standards are useful for understanding trends in student achievement. They have been widely used by national and state officials as a common yardstick for academic performance. The mathematics achievement-level descriptions are summarized in figure 1.

| Figure 1-A | The Nation's Report Card 2005 State Assessment |
|---|---|
| | **Descriptions of NAEP mathematics achievement levels, grade 4** |
| ***Basic*** Level (214) | Fourth-grade students performing at the *Basic* level should show some evidence of understanding the mathematical concepts and procedures in the five NAEP content areas. |

Fourth-graders performing at the *Basic* level should be able to estimate and use basic facts to perform simple computations with whole numbers, show some understanding of fractions and decimals, and solve some simple real-world problems in all NAEP content areas. Students at this level should be able to use—though not always accurately—four-function calculators, rulers, and geometric shapes. Their written responses are often minimal and presented without supporting information.

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|---|---|
| ***Proficient*** Level (249) | Fourth-grade students performing at the *Proficient* level should consistently apply integrated procedural knowledge and conceptual understanding to problem solving in the five NAEP content areas. |

Fourth-graders performing at the *Proficient* level should be able to use whole numbers to estimate, compute, and determine whether results are reasonable. They should have a conceptual understanding of fractions and decimals; be able to solve real-world problems in all NAEP content areas; and use four-function calculators, rulers, and geometric shapes appropriately. Students performing at the *Proficient* level should employ problem-solving strategies such as identifying and using appropriate information. Their written solutions should be organized and presented both with supporting information and explanations of how they were achieved.

| | |
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| ***Advanced*** Level (282) | Fourth-grade students performing at the *Advanced* level should apply integrated procedural knowledge and conceptual understanding to complex and nonroutine real-world problem solving in the five NAEP content areas. |

Fourth-graders performing at the *Advanced* level should be able to solve complex and nonroutine real-world problems in all NAEP content areas. They should display mastery in the use of four-function calculators, rulers, and geometric shapes. The students are expected to draw logical conclusions and justify answers and solution processes by explaining why, as well as how, they were achieved. They should go beyond the obvious in their interpretations and be able to communicate their thoughts clearly and concisely.

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NOTE: The scores in parentheses indicate the cut point on the scale at which the achievement-level range begins.
SOURCE: National Assessment Governing Board. (2004). *Mathematics Framework for the 2005 National Assessment of Educational Progress.* Washington, DC: Author.

| Figure 1-B | The Nation's Report Card 2005 State Assessment |
|---|---|
| | **Descriptions of NAEP mathematics achievement levels, grade 8** |
| ***Basic*** Level (262) | Eighth-grade students performing at the *Basic* level should exhibit evidence of conceptual and procedural understanding in the five NAEP content areas. This level of performance signifies an understanding of arithmetic operations—including estimation—on whole numbers, decimals, fractions, and percents. |

Eighth-graders performing at the *Basic* level should complete problems correctly with the help of structural prompts such as diagrams, charts, and graphs. They should be able to solve problems in all NAEP content areas through the appropriate selection and use of strategies and technological tools—including calculators, computers, and geometric shapes. Students at this level also should be able to use fundamental algebraic and informal geometric concepts in problem solving. As they approach the *Proficient* level, students at the *Basic* level should be able to determine which of the available data are necessary and sufficient for correct solutions and use them in problem solving. However, these eighth-graders show limited skill in communicating mathematically.

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|---|---|
| ***Proficient*** Level (299) | Eighth-grade students performing at the *Proficient* level should apply mathematical concepts and procedures consistently to complex problems in the five NAEP content areas. |

Eighth-graders performing at the *Proficient* level should be able to conjecture, defend their ideas, and give supporting examples. They should understand the connections among fractions, percents, decimals, and other mathematical topics such as algebra and functions. Students at this level are expected to have a thorough understanding of *Basic*-level arithmetic operations—an understanding sufficient for problem solving in practical situations. Quantity and spatial relationships in problem solving and reasoning should be familiar to them, and they should be able to convey underlying reasoning skills beyond the level of arithmetic. They should be able to compare and contrast mathematical ideas and generate their own examples. These students should make inferences from data and graphs, apply properties of informal geometry, and accurately use the tools of technology. Students at this level should understand the process of gathering and organizing data and be able to calculate, evaluate, and communicate results within the domain of statistics and probability.

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| ***Advanced*** Level (333) | Eighth-grade students performing at the *Advanced* level should be able to reach beyond the recognition, identification, and application of mathematical rules in order to generalize and synthesize concepts and principles in the five NAEP content areas. |

Eighth-graders performing at the *Advanced* level should be able to probe examples and counterexamples in order to shape generalizations from which they can develop models. Eighth-graders performing at the *Advanced* level should use number sense and geometric awareness to consider the reasonableness of an answer. They are expected to use abstract thinking to create unique problem-solving techniques and explain the reasoning processes underlying their conclusions.

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NOTE: The scores in parentheses indicate the cut point on the scale at which the achievement-level range begins.
SOURCE: National Assessment Governing Board. (2004). *Mathematics Framework for the 2005 National Assessment of Educational Progress.* Washington, DC: Author.

## NAEP 2005 Mathematics Overall Scale Score and Achievement-Level Results for Public School Students

### Overall Scale Score Results

In this section student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500. Scores on this scale are comparable from 1990 through 2005.

Prior to 2000, testing accommodations were not provided for students with special needs in NAEP state mathematics assessments. For 2000, results are displayed for both the sample in which accommodations were permitted and the sample in which they were not permitted. Subsequent assessment results were based on the more inclusive samples. In the text of this report, comparisons to 2000 results refer only to the sample in which accommodations were permitted.

Tables 1-A and 1-B present the overall performance results of grade 4 and 8 public school students in Utah, the nation (public), and the region. The list of states making up a given region for NAEP prior to 2003 differed from the list used by the U.S. Census Bureau which has been used in NAEP from 2003 onward. Therefore, the data for the state's region are given only for 2003 and 2005. The first column of results presents the average score on the NAEP mathematics scale. The remaining columns show the scores at selected percentiles. A percentile indicates the percentage of students whose scores fell at or below a particular score. For example, the 25th percentile demarks the cut point for the lowest 25 percent of students within the distribution of scale scores.

## *Grade 4 Scale Score Results*

- In 2005, the average scale score for students in Utah was 239. This was higher than that for students across the nation (237).
- In Utah, the average scale score for students in 2005 was higher than that in 1992 (224).
- In Utah, the average scale score for students in 2005 was higher than that in 1996 (227).
- In Utah, the average scale score for students in 2005 was higher than that in 2000 (227).
- In Utah, the average scale score for students in 2005 was higher than that in 2003 (235). Similarly, the average scale score for students in public schools across the nation in 2005 was higher than that in 2003 (234).

**Table 1-A**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and selected percentiles, grade 4 public schools: various years, 1992–2005**

| Year and jurisdiction | Average scale score | 10th Percentile | 25th Percentile | 50th Percentile | 75th Percentile | 90th Percentile |
|---|---|---|---|---|---|---|
| 1992[1] Nation (public) | 219( 0.8)* | 176( 1.1)* | 197( 0.8)* | 220( 0.9)* | 241( 1.3)* | 259( 0.8)* |
| Utah | 224( 1.0)* | 187( 1.8)* | 206( 1.1)* | 225( 1.1)* | 243( 0.9)* | 260( 0.8)* |
| 1996[1] Nation (public) | 222( 1.0)* | 180( 1.7)* | 201( 1.3)* | 224( 1.1)* | 244( 1.3)* | 261( 0.8)* |
| Utah | 227( 1.2)* | 189( 2.0)* | 208( 2.1)* | 228( 1.1)* | 247( 1.2)* | 262( 2.2)* |
| 2000[1] Nation (public) | 226( 1.0)* | 185( 1.1)* | 206( 1.4)* | 228( 0.9)* | 249( 1.2)* | 265( 0.9)* |
| Utah | 227( 1.2)* | 188( 2.9)* | 209( 1.8)* | 229( 1.4)* | 248( 1.5)* | 263( 1.1)* |
| 2000 Nation (public) | 224( 1.0)* | 183( 1.4)* | 203( 1.4)* | 225( 1.3)* | 247( 1.2)* | 264( 1.0)* |
| Utah | 227( 1.3)* | 188( 1.7)* | 208( 1.8)* | 229( 1.8)* | 247( 1.6)* | 262( 1.7)* |
| 2003 Nation (public) | 234( 0.2)* | 196( 0.3)* | 215( 0.3)* | 235( 0.2)* | 254( 0.3)* | 270( 0.2)* |
| West[2] | 230( 0.5)* | 191( 0.6)* | 210( 0.7)* | 231( 0.5)* | 251( 0.6)* | 267( 0.8)* |
| Utah | 235( 0.8)* | 200( 1.4)* | 218( 1.1)* | 237( 0.8)* | 253( 0.8)* | 267( 1.1)* |
| 2005 Nation (public) | 237( 0.2) | 199( 0.3) | 219( 0.2) | 239( 0.2) | 257( 0.2) | 272( 0.2) |
| West[2] | 233( 0.4) | 193( 0.6) | 213( 0.4) | 235( 0.4) | 254( 0.5) | 270( 0.5) |
| Utah | 239( 0.8) | 204( 0.8) | 222( 1.6) | 241( 0.9) | 257( 0.5) | 271( 1.3) |

* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] The four regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West.
NOTE: The NAEP mathematics scale ranges from 0 to 500. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## *Grade 8 Scale Score Results*

- In 2005, the average scale score for students in Utah was 279. This was higher than that for students across the nation (278).
- In Utah, the average scale score for students in 2005 was higher than that in 1992 (274).
- In Utah, the average scale score for students in 2005 was not significantly different from that in 1996 (277).
- In Utah, the average scale score for students in 2005 was higher than that in 2000 (274).
- In Utah, the average scale score for students in 2005 was not significantly different from that in 2003 (281). However, the average scale score for students in public schools across the nation in 2005 was higher than that in 2003 (276).

**Table 1-B**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and selected percentiles, grade 8 public schools: various years, 1992–2005**

| Year and jurisdiction | Average scale score | 10th Percentile | 25th Percentile | 50th Percentile | 75th Percentile | 90th Percentile |
|---|---|---|---|---|---|---|
| 1992[1] Nation (public) | 267( 1.0)* | 219( 1.5)* | 242( 1.5)* | 268( 1.1)* | 293( 1.3)* | 314( 1.6)* |
| Utah | 274( 0.7)* | 233( 1.3) | 254( 1.4) | 276( 0.9)* | 297( 1.5)* | 314( 1.1)* |
| 1996[1] Nation (public) | 271( 1.2)* | 222( 1.9)* | 247( 1.3)* | 272( 1.1)* | 296( 1.6)* | 316( 2.1)* |
| Utah | 277( 1.0) | 237( 2.6) | 257( 1.5) | 278( 1.3) | 298( 1.2)* | 315( 1.0)* |
| 2000[1] Nation (public) | 274( 0.8)* | 225( 2.0)* | 250( 0.9)* | 276( 0.7)* | 300( 1.2) | 321( 1.2) |
| Utah | 275( 1.2)* | 230( 2.0) | 254( 2.0) | 278( 1.1) | 300( 0.9)* | 317( 0.9)* |
| 2000 Nation (public) | 272( 0.9)* | 221( 1.3)* | 247( 1.2)* | 274( 1.0)* | 299( 1.0)* | 320( 1.3)* |
| Utah | 274( 1.2)* | 226( 3.0)* | 252( 1.6)* | 277( 1.1)* | 299( 1.5)* | 316( 1.3)* |
| 2003 Nation (public) | 276( 0.3)* | 228( 0.6)* | 253( 0.4)* | 278( 0.4)* | 301( 0.3)* | 321( 0.3)* |
| West[2] | 272( 0.6) | 222( 1.2) | 247( 0.7) | 273( 0.6) | 299( 0.7) | 320( 1.0) |
| Utah | 281( 1.0) | 235( 1.8) | 258( 1.2) | 282( 1.9) | 305( 1.6) | 324( 1.5) |
| 2005 Nation (public) | 278( 0.2) | 230( 0.3) | 254( 0.3) | 279( 0.2) | 303( 0.2) | 323( 0.3) |
| West[2] | 273( 0.4) | 224( 0.8) | 248( 0.7) | 274( 0.4) | 299( 0.6) | 321( 0.5) |
| Utah | 279( 0.7) | 233( 1.2) | 258( 1.6) | 281( 1.1) | 304( 1.1) | 322( 0.9) |

* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] The four regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West.
NOTE: The NAEP mathematics scale ranges from 0 to 500. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

### Overall Achievement-Level Results

In this section student performance is reported as the percentage of students performing relative to performance standards set by the National Assessment Governing Board (NAGB). These performance standards for what students should know and be able to do were based on the recommendations of broadly representative panels of educators and members of the public.

In 2000 only, results were obtained for two student samples: one for which accommodations were permitted and one for which accommodations were not permitted. However, in the text of this report, comparisons to 2000 results refer only to the sample in which accommodations were permitted.

Tables 2-A and 2-B present the percentage of students at grade 4 and 8 who performed below *Basic*, at or above *Basic*, at or above *Proficient*, and at the *Advanced* level. Because the percentages are cumulative from *Basic* to *Proficient* to *Advanced*, they sum to more than 100 percent. Only the percentage of students performing at or above *Basic* (which includes the students at *Proficient* and *Advanced)* plus the students below *Basic* will sum to 100 percent (except for rounding).

## *Grade 4 Achievement-Level Results*

- In 2005, the percentage of Utah's students who performed at or above *Proficient* was 37 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (35 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 1992 (19 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 1996 (23 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 2000 (23 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 2003 (31 percent).

**Table 2-A**

**The Nation's Report Card 2005 State Assessment**

**Percentage of students at or above mathematics achievement levels, grade 4 public schools: various years, 1992–2005**

| Year and jurisdiction | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|
| 1992[1] Nation (public) | 43( 1.2)* | 57( 1.2)* | 17( 1.1)* | 2( 0.3)* |
| Utah | 34( 1.7)* | 66( 1.7)* | 19( 1.1)* | 1( 0.3)* |
| 1996[1] Nation (public) | 38( 1.4)* | 62( 1.4)* | 20( 1.0)* | 2( 0.3)* |
| Utah | 31( 1.6)* | 69( 1.6)* | 23( 1.3)* | 2( 0.4)* |
| 2000[1] Nation (public) | 33( 1.2)* | 67( 1.2)* | 25( 1.2)* | 2( 0.3)* |
| Utah | 30( 1.7)* | 70( 1.7)* | 24( 1.3)* | 2( 0.3)* |
| 2000 Nation (public) | 36( 1.4)* | 64( 1.4)* | 22( 1.1)* | 2( 0.3)* |
| Utah | 31( 1.6)* | 69( 1.6)* | 23( 1.4)* | 2( 0.5)* |
| 2003 Nation (public) | 24( 0.3)* | 76( 0.3)* | 31( 0.3)* | 4( 0.1)* |
| West[2] | 29( 0.7)* | 71( 0.7)* | 27( 0.8)* | 3( 0.3)* |
| Utah | 21( 1.1)* | 79( 1.1)* | 31( 1.3)* | 2( 0.4)* |
| 2005 Nation (public) | 21( 0.2) | 79( 0.2) | 35( 0.2) | 5( 0.1) |
| West[2] | 26( 0.5) | 74( 0.5) | 31( 0.6) | 4( 0.2) |
| Utah | 17( 1.0) | 83( 1.0) | 37( 1.5) | 4( 0.6) |

* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] The four regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West.
NOTE: Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## *Grade 8 Achievement-Level Results*

- In 2005, the percentage of Utah's students who performed at or above *Proficient* was 30 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (28 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 1992 (22 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 1996 (24 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was greater than that in 2000 (25 percent).
- In Utah, the percentage of students who performed at or above *Proficient* in 2005 was not significantly different from that in 2003 (31 percent).

**Table 2-B**

**The Nation's Report Card 2005 State Assessment**

**Percentage of students at or above mathematics achievement levels, grade 8 public schools: various years, 1992–2005**

| Year and jurisdiction | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|
| 1992[1] Nation (public) | 44( 1.2)* | 56( 1.2)* | 20( 1.0)* | 3( 0.4)* |
| Utah | 33( 1.2)* | 67( 1.2)* | 22( 1.0)* | 2( 0.4)* |
| 1996[1] Nation (public) | 39( 1.3)* | 61( 1.3)* | 23( 1.2)* | 4( 0.6)* |
| Utah | 30( 1.5) | 70( 1.5) | 24( 1.3)* | 3( 0.4)* |
| 2000[1] Nation (public) | 35( 0.9)* | 65( 0.9)* | 26( 1.0)* | 5( 0.5) |
| Utah | 32( 1.4) | 68( 1.4) | 26( 1.2)* | 3( 0.4)* |
| 2000 Nation (public) | 38( 1.0)* | 62( 1.0)* | 25( 0.9)* | 5( 0.4)* |
| Utah | 34( 1.4)* | 66( 1.4)* | 25( 1.1)* | 3( 0.5)* |
| 2003 Nation (public) | 33( 0.3)* | 67( 0.3)* | 27( 0.3)* | 5( 0.1)* |
| West[2] | 39( 0.7) | 61( 0.7) | 25( 0.6) | 5( 0.4) |
| Utah | 28( 1.1) | 72( 1.1) | 31( 1.5) | 6( 0.7) |
| 2005 Nation (public) | 32( 0.2) | 68( 0.2) | 28( 0.2) | 6( 0.1) |
| West[2] | 38( 0.5) | 62( 0.5) | 25( 0.4) | 5( 0.2) |
| Utah | 29( 1.0) | 71( 1.0) | 30( 1.0) | 5( 0.6) |

* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] The four regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West.
NOTE: Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## Mathematics Performance of Selected Student Groups

This section of the report presents trend results for students in Utah and the nation by demographic characteristics. Student performance data are reported for

- race/ethnicity
- student eligibility for free/reduced-price school lunch
- parents' highest level of education (for grade 8 only).

Definitions of NAEP reporting groups are available on the NAEP website (http://nces.ed.gov/nationsreportcard/mathematics/results2005/interpret-results.asp#RepGroups).

Each of the variables is reported in tables that present the percentage of students belonging to each group in the first column and the average scale score in the second column. The columns to the right show the percentage of students below *Basic* and at or above each achievement level.

Differences between scores or percentages mentioned in the text are calculated using unrounded values. The result of subtracting the rounded values displayed in the tables may differ (usually by one point) from the results that would be obtained by subtracting the unrounded values.

The reader is cautioned against making causal inferences about the performance of groups of students relative to demographic variables. Many factors other than those discussed here, including home and school factors, may affect student performance.

NAEP collects information on many additional variables, including school and home factors related to achievement. All of this information is in an interactive database available on the NAEP website (http://nces.ed.gov/nationsreportcard/).

### Race/Ethnicity

Schools reported the racial/ethnic subgroup that best described the students eligible to be assessed. The six mutually exclusive categories are White, Black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native, and Unclassified. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin unless specified. Tables 3-A and 3-B show average scale scores and achievement-level data for public school students at grades 4 and 8 in Utah and the nation by race/ethnicity. In 2000 only, results were obtained for student samples for which accommodations were permitted and those for which accommodations were not permitted. However, in the text of this report, comparisons to 2000 results refer only to the sample for which accommodations were permitted.

## *Grade 4 Scale Score Results by Race/Ethnicity*

- In 2005, White students in Utah had an average scale score that was higher than that of Hispanic students, but was not found to be significantly different from that of Asian/Pacific Islander students.
- The average scale scores of White and Hispanic students in Utah were higher in 2005 than in 1992.
- The average scale scores of White and Hispanic students in Utah were higher in 2005 than in 1996.
- The average scale scores of White, Hispanic, and Asian/Pacific Islander students in Utah were higher in 2005 than in 2000.
- The average scale scores of White and Asian/Pacific Islander students in Utah were higher in 2005 than in 2003. The average scale score of Hispanic students in Utah was not significantly different between 2003 and 2005.
- Data are not reported for Black students in 2005, because reporting standards were not met.
- In 2005, Hispanic students had an average score that was lower than that of White students by 22 points. In 1992, the average score for Hispanic students was lower than that of White students by 20 points.

## *Grade 4 Achievement-Level Results by Race/Ethnicity*

- In Utah in 2005, the percentage of White students performing at or above *Proficient* was greater than that of Hispanic students, but was not found to be significantly different from that of Asian/Pacific Islander students.
- The percentage of White students in Utah performing at or above *Proficient* was greater in 2005 than in 1992. The differences between the percentages of Hispanic students in Utah performing at or above *Proficient* in 1992 and the percentage in 2005 was not found to be significant.
- The percentage of White students in Utah performing at or above *Proficient* was greater in 2005 than in 1996. The differences between the percentages of Hispanic students in Utah performing at or above *Proficient* in 1996 and the percentage in 2005 was not found to be significant.
- The respective percentages of White and Hispanic students in Utah performing at or above *Proficient* were greater in 2005 than in 2000. The differences between the percentages of Asian/Pacific Islander students in Utah performing at or above *Proficient* in 2000 and the percentage in 2005 was not found to be significant.
- The respective percentages of White and Asian/Pacific Islander students in Utah performing at or above *Proficient* were greater in 2005 than in 2003. The differences between the percentages of Hispanic students in Utah performing at or above *Proficient* in 2003 and the percentage in 2005 was not found to be significant.

**Table 3-A**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by race/ethnicity, grade 4 public schools: various years, 1992–2005**

| Race/ethnicity | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **White** | | | | | | |
| 1992[1] Nation (public) | 72( 0.7)* | 227( 0.9)* | 32( 1.3)* | 68( 1.3)* | 22( 1.5)* | 2( 0.4)* |
| Utah | 93( 0.8)* | 225( 0.9)* | 32( 1.7)* | 68( 1.7)* | 20( 1.1)* | 1( 0.3)* |
| 1996[1] Nation (public) | 71( 0.8)* | 230( 1.0)* | 27( 1.5)* | 73( 1.5)* | 25( 1.3)* | 3( 0.5)* |
| Utah | 91( 0.9)* | 228( 1.0)* | 29( 1.6)* | 71( 1.6)* | 24( 1.3)* | 2( 0.5)* |
| 2000[1] Nation (public) | 67( 0.7)* | 234( 1.1)* | 22( 1.3)* | 78( 1.3)* | 32( 1.5)* | 3( 0.4)* |
| Utah | 86( 1.2)* | 230( 1.1)* | 26( 1.5)* | 74( 1.5)* | 26( 1.5)* | 2( 0.3)* |
| 2000 Nation (public) | 62( 1.9)* | 233( 0.9)* | 24( 1.5)* | 76( 1.5)* | 30( 1.4)* | 3( 0.5)* |
| Utah | 84( 1.2) | 230( 1.2)* | 26( 1.5)* | 74( 1.5)* | 25( 1.6)* | 2( 0.5)* |
| 2003 Nation (public) | 58( 0.4)* | 243( 0.2)* | 13( 0.2)* | 87( 0.2)* | 42( 0.3)* | 5( 0.2)* |
| Utah | 82( 1.5) | 238( 0.8)* | 16( 1.0)* | 84( 1.0)* | 35( 1.5)* | 3( 0.5)* |
| 2005 Nation (public) | 57( 0.3) | 246( 0.2) | 11( 0.2) | 89( 0.2) | 47( 0.3) | 7( 0.1) |
| Utah | 81( 0.9) | 242( 0.8) | 13( 0.9) | 87( 0.9) | 41( 1.6) | 4( 0.7) |
| **Black** | | | | | | |
| 1992[1] Nation (public) | 18( 0.5) | 192( 1.4)* | 78( 2.0)* | 22( 2.0)* | 2( 0.6)* | #(***) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 17( 0.7) | 199( 2.6)* | 70( 3.5)* | 30( 3.5)* | 4( 1.3)* | #(***) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 17( 0.4) | 204( 1.6)* | 64( 2.5)* | 36( 2.5)* | 5( 0.8)* | #(***) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 17( 1.2) | 203( 1.2)* | 65( 1.9)* | 35( 1.9)* | 4( 0.8)* | #(***) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 17( 0.3) | 216( 0.4)* | 46( 0.7)* | 54( 0.7)* | 10( 0.3)* | #( 0.1)* |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 17( 0.3) | 220( 0.3) | 40( 0.5) | 60( 0.5) | 13( 0.3) | 1( 0.1) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| **Hispanic** | | | | | | |
| 1992[1] Nation (public) | 7( 0.6)* | 201( 1.7)* | 68( 2.9)* | 32( 2.9)* | 5( 1.2)* | #(***) |
| Utah | 4( 0.5)* | 206( 3.1)* | 59( 5.2)* | 41( 5.2)* | 7( 3.1) | #(***) |
| 1996[1] Nation (public) | 9( 0.6)* | 204( 3.1)* | 63( 3.6)* | 37( 3.6)* | 7( 1.6)* | #(***) |
| Utah | 5( 0.7)* | 204( 3.8)* | 61( 6.0)* | 39( 6.0)* | 7( 3.8) | #(***) |
| 2000[1] Nation (public) | 11( 0.5)* | 209( 1.8)* | 55( 2.6)* | 45( 2.6)* | 8( 1.2)* | #(***) |
| Utah | 7( 0.7)* | 204( 3.0)* | 60( 4.5)* | 40( 4.5)* | 7( 2.6) | #(***) |
| 2000 Nation (public) | 16( 1.2)* | 207( 1.5)* | 59( 2.6)* | 41( 2.6)* | 7( 1.0)* | #( 0.1)* |
| Utah | 9( 0.9)* | 205( 3.2)* | 61( 4.9)* | 39( 4.9)* | 6( 2.0)* | 1(***) |
| 2003 Nation (public) | 19( 0.4)* | 221( 0.4)* | 38( 0.7)* | 62( 0.7)* | 15( 0.5)* | 1( 0.1)* |
| Utah | 11( 1.1) | 216( 1.8) | 48( 3.0) | 52( 3.0) | 11( 1.9) | #(***) |
| 2005 Nation (public) | 20( 0.3) | 225( 0.3) | 33( 0.5) | 67( 0.5) | 19( 0.3) | 1( 0.1) |
| Utah | 13( 0.8) | 220( 1.6) | 40( 3.6) | 60( 3.6) | 13( 2.0) | 1(***) |
| **Asian/Pacific Islander** | | | | | | |
| 1992[1] Nation (public) | 3( 0.3)* | 231( 2.3)* | 26( 3.5)* | 74( 3.5)* | 27( 4.0)* | 4( 2.0)* |
| Utah | 2( 0.3)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 3( 0.3)* | 225( 4.8)* | 35( 5.8)* | 65( 5.8)* | 20( 5.8)* | 5( 2.4)* |
| Utah | 2( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 3( 0.5) | 217( 4.5)* | 46( 6.9)* | 54( 6.9)* | 13( 4.8)* | 2(***) |
| 2000 Nation (public) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 3( 0.5) | 219( 4.1)* | 42( 5.4)* | 58( 5.4)* | 18( 5.7) | 2(***) |
| 2003 Nation (public) | 4( 0.2) | 246( 1.2)* | 13( 1.0)* | 87( 1.0)* | 48( 2.0)* | 10( 1.2)* |
| Utah | 4( 0.5) | 224( 2.2)* | 34( 4.1) | 66( 4.1) | 16( 3.4)* | 2(***) |
| 2005 Nation (public) | 4( 0.1) | 251( 0.7) | 11( 0.5) | 89( 0.5) | 54( 1.1) | 14( 0.9) |
| Utah | 3( 0.3) | 235( 3.8) | 24( 4.7) | 76( 4.7) | 33( 6.0) | 7( 3.2) |

See notes at end of table.

**Table 3-A**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by race/ethnicity, grade 4 public schools: various years, 1992–2005—Continued**

| Race/ethnicity | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **American Indian/Alaska Native** | | | | | | |
| 1992[1] Nation (public) | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 1( 0.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 2( 0.8) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 1( 0.1) | 224( 1.1)* | 35( 1.7) | 65( 1.7) | 18( 1.3)* | 1( 0.6) |
| Utah | 1( 0.7) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 1( 0.1) | 227( 1.0) | 31( 1.7) | 69( 1.7) | 22( 1.2) | 2( 0.5) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| **Unclassified[2]** | | | | | | |
| 1992[1] Nation (public) | #( 0.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 1( 0.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 1( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 1( 0.0)* | 236( 1.1)* | 20( 1.9) | 80( 1.9) | 32( 1.7)* | 3( 0.7) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 1( 0.0) | 240( 0.9) | 18( 1.4) | 82( 1.4) | 38( 2.0) | 5( 1.0) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |

# Estimate rounds to zero.
‡ Reporting standards are not met.
* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] "Unclassified" students are those whose school-reported race was "other" or "unavailable," or was missing, and who self-reported more than one race category or none.
NOTE: The NAEP mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## *Grade 8 Scale Score Results by Race/Ethnicity*

- In 2005, White students in Utah had an average scale score that was higher than those of Hispanic and Asian/Pacific Islander students.
- The average scale score of White students in Utah was higher in 2005 than in 1992. The average scale score of Hispanic students in Utah was not significantly different between 1992 and 2005.
- The average scale score of White students in Utah was higher in 2005 than in 1996. The average scale score of Hispanic students in Utah was not significantly different between 1996 and 2005.
- The average scale scores of White and Hispanic students in Utah were higher in 2005 than in 2000. The average scale score of Asian/Pacific Islander students in Utah was not significantly different between 2000 and 2005.
- The average scale scores of White, Hispanic, and Asian/Pacific Islander students in Utah were not significantly different between 2003 and 2005.
- Data are not reported for Black students in 2005, because reporting standards were not met.
- In 2005, Hispanic students had an average score that was lower than that of White students by 28 points. In 1992, the average score for Hispanic students was lower than that of White students by 22 points.

## *Grade 8 Achievement-Level Results by Race/Ethnicity*

- In Utah in 2005, the percentage of White students performing at or above *Proficient* was greater than that of Hispanic students, but was not found to be significantly different from that of Asian/Pacific Islander students.
- The percentage of White students in Utah performing at or above *Proficient* was greater in 2005 than in 1992. The differences between the percentages of Hispanic students in Utah performing at or above *Proficient* in 1992 and the percentage in 2005 was not found to be significant.
- The percentage of White students in Utah performing at or above *Proficient* was greater in 2005 than in 1996. The differences between the percentages of Hispanic students in Utah performing at or above *Proficient* in 1996 and the percentage in 2005 was not found to be significant.
- The percentage of White students in Utah performing at or above *Proficient* was greater in 2005 than in 2000. The differences between the percentages of Hispanic and Asian/Pacific Islander students in Utah performing at or above *Proficient* in 2000 and the respective percentages in 2005 were not found to be significant.
- The differences between the percentages of White, Hispanic, and Asian/Pacific Islander students in Utah performing at or above *Proficient* in 2003 and the respective percentages in 2005 were not found to be significant.

**Table 3-B**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by race/ethnicity, grade 8 public schools: various years, 1992–2005**

| Race/ethnicity | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **White** | | | | | | |
| 1992[1] Nation (public) | 72( 0.6)* | 276( 1.1)* | 34( 1.4)* | 66( 1.4)* | 25( 1.2)* | 3( 0.5)* |
| Utah | 93( 0.9)* | 276( 0.7)* | 31( 1.2)* | 69( 1.2)* | 23( 1.2)* | 2( 0.4)* |
| 1996[1] Nation (public) | 70( 0.6)* | 280( 1.3)* | 28( 1.5)* | 72( 1.5)* | 29( 1.5)* | 5( 0.8)* |
| Utah | 92( 0.8)* | 278( 0.9)* | 28( 1.3)* | 72( 1.3)* | 26( 1.3)* | 3( 0.4)* |
| 2000[1] Nation (public) | 69( 0.5)* | 284( 0.9)* | 24( 1.0)* | 76( 1.0)* | 33( 1.3)* | 6( 0.6) |
| Utah | 90( 0.9)* | 278( 1.1)* | 29( 1.4)* | 71( 1.4)* | 27( 1.2)* | 3( 0.5)* |
| 2000 Nation (public) | 63( 1.2)* | 283( 0.9)* | 25( 1.1)* | 75( 1.1)* | 33( 1.1)* | 6( 0.5)* |
| Utah | 88( 1.1)* | 277( 1.2)* | 29( 1.5)* | 71( 1.5)* | 27( 1.2)* | 3( 0.5)* |
| 2003 Nation (public) | 62( 0.4)* | 287( 0.3)* | 21( 0.3) | 79( 0.3) | 36( 0.4)* | 7( 0.2)* |
| Utah | 86( 0.9) | 285( 1.0) | 23( 1.0) | 77( 1.0) | 34( 1.5) | 6( 0.8) |
| 2005 Nation (public) | 60( 0.3) | 288( 0.2) | 21( 0.2) | 79( 0.2) | 37( 0.3) | 7( 0.1) |
| Utah | 84( 0.9) | 283( 0.7) | 25( 0.9) | 75( 0.9) | 33( 1.1) | 5( 0.6) |
| **Black** | | | | | | |
| 1992[1] Nation (public) | 17( 0.3) | 236( 1.3)* | 81( 2.0)* | 19( 2.0)* | 2( 0.7)* | #(***) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 16( 0.5) | 241( 2.1)* | 74( 2.6)* | 26( 2.6)* | 4( 0.9)* | #(***) |
| Utah | 1( 0.2)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 14( 0.2)* | 245( 1.5)* | 70( 1.9)* | 30( 1.9)* | 5( 0.6)* | #( 0.2) |
| Utah | 1( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 17( 0.8) | 243( 1.3)* | 70( 1.6)* | 30( 1.6)* | 5( 0.7)* | #( 0.1)* |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 17( 0.3) | 252( 0.5)* | 61( 0.9)* | 39( 0.9)* | 7( 0.3)* | #( 0.1) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 17( 0.2) | 254( 0.4) | 59( 0.6) | 41( 0.6) | 8( 0.3) | 1( 0.1) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| **Hispanic** | | | | | | |
| 1992[1] Nation (public) | 8( 0.4)* | 247( 1.2)* | 67( 2.0)* | 33( 2.0)* | 6( 1.0)* | #( 0.2)* |
| Utah | 4( 0.6)* | 253( 2.9) | 59( 6.1) | 41( 6.1) | 7( 2.5) | 1(***) |
| 1996[1] Nation (public) | 9( 0.5)* | 250( 2.5)* | 62( 3.0)* | 38( 3.0)* | 8( 1.7)* | 1(***) |
| Utah | 4( 0.6)* | 257( 4.5) | 54( 5.2) | 46( 5.2) | 8( 3.3) | 1(***) |
| 2000[1] Nation (public) | 11( 0.3)* | 252( 1.8)* | 60( 2.2)* | 40( 2.2)* | 8( 1.1)* | #( 0.2)* |
| Utah | 6( 0.6)* | 246( 4.1)* | 66( 4.3) | 34( 4.3) | 6( 2.3) | #(***) |
| 2000 Nation (public) | 14( 0.9)* | 252( 1.4)* | 60( 1.9)* | 40( 1.9)* | 8( 1.0)* | #( 0.2)* |
| Utah | 6( 0.6)* | 244( 3.8)* | 69( 4.5)* | 31( 4.5)* | 6( 2.5) | #(***) |
| 2003 Nation (public) | 15( 0.3)* | 258( 0.6)* | 53( 0.9)* | 47( 0.9)* | 11( 0.5)* | 1( 0.1) |
| Utah | 9( 0.7) | 249( 3.0) | 65( 4.8) | 35( 4.8) | 7( 2.1) | 1(***) |
| 2005 Nation (public) | 17( 0.2) | 261( 0.4) | 50( 0.6) | 50( 0.6) | 13( 0.4) | 1( 0.1) |
| Utah | 10( 0.6) | 255( 2.3) | 55( 3.9) | 45( 3.9) | 9( 2.5) | #(***) |
| **Asian/Pacific Islander** | | | | | | |
| 1992[1] Nation (public) | 2( 0.3)* | 290( 7.0) | 25( 5.8) | 75( 5.8) | 43( 8.0) | 14( 4.9) |
| Utah | 2( 0.3)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 2( 0.2)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 4( 0.3)* | 286( 3.8) | 27( 3.7)* | 73( 3.7)* | 40( 4.4) | 12( 3.1) |
| Utah | 2( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 4( 0.4) | 287( 3.9) | 27( 3.0)* | 73( 3.0)* | 40( 4.8) | 12( 3.3) |
| Utah | 3( 0.4) | 262( 4.5) | 53( 6.8) | 47( 6.8) | 20( 5.3) | 2(***) |
| 2003 Nation (public) | 4( 0.2) | 289( 1.3)* | 23( 1.2)* | 77( 1.2)* | 42( 1.4)* | 12( 1.4) |
| Utah | 3( 0.3) | 275( 3.7) | 34( 5.8) | 66( 5.8) | 25( 5.2) | 6( 2.7) |
| 2005 Nation (public) | 5( 0.1) | 294( 1.0) | 19( 0.8) | 81( 0.8) | 46( 1.2) | 16( 1.0) |
| Utah | 3( 0.4) | 273( 4.5) | 37( 6.3) | 63( 6.3) | 26( 6.9) | 2(***) |

See notes at end of table.

**Table 3-B**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by race/ethnicity, grade 8 public schools: various years, 1992–2005—Continued**

| Race/ethnicity | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **American Indian/Alaska Native** | | | | | | |
| 1992[1] Nation (public) | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 1( 0.4) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 2( 0.8) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 1( 0.1) | 265( 1.2) | 46( 1.8) | 54( 1.8) | 16( 1.3) | 2( 0.7) |
| Utah | 1( 0.3) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 1( 0.0) | 266( 1.0) | 45( 1.8) | 55( 1.8) | 14( 1.0) | 2( 0.4) |
| Utah | 2( 0.6) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| **Unclassified[2]** | | | | | | |
| 1992[1] Nation (public) | 1( 0.4) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 1996[1] Nation (public) | #( 0.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 1( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 1( 0.0)* | 276( 2.2) | 30( 3.2) | 70( 3.2) | 24( 2.5) | 3( 1.3) |
| Utah | #(***) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 1( 0.0) | 278( 1.9) | 31( 2.7) | 69( 2.7) | 29( 2.3) | 7( 1.2) |
| Utah | #(***) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |

# Estimate rounds to zero.
‡ Reporting standards are not met.
* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
[2] "Unclassified" students are those whose school-reported race was "other" or "unavailable," or was missing, and who self-reported more than one race category or none.
NOTE: The NAEP mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## Student Eligibility for Free/Reduced-Price School Lunch

NAEP collects data on eligibility for the federal program providing free or reduced-price school lunches. The free/reduced-price lunch component of the National School Lunch Program (NSLP) offered through the U.S. Department of Agriculture (USDA) is designed to ensure that children near or below the poverty line receive nourishing meals. Eligibility is determined through the USDA's Income Eligibility Guidelines, and results for this category of students are included as an indicator of lower family income. NAEP first collected information on participation in this program in 1996; therefore, cross-year comparisons to assessments prior to 1996 cannot be made.

Tables 4-A and 4-B show average scale scores and achievement-level data for public school students at grades 4 and 8 in Utah and the nation by eligibility for free/reduced-price lunch. In 2000 only, results were obtained for student samples for which accommodations were permitted and those for which accommodations were not permitted. However, in the text of this report, comparisons to 2000 results refer only to the sample for which accommodations were permitted.

### *Grade 4 Scale Score Results by Free/Reduced-Price Lunch Eligibility*

- In 2005, students in Utah eligible for free/reduced-price lunch had an average mathematics scale score of 229. This was lower than that of students in Utah not eligible for this program (244).
- In 2005, students who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 15 points. In 1996, the average score for students who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 15 points.
- Students in Utah eligible for free/reduced-price lunch had an average scale score (229) in 2005 that was higher than that of students in the nation who were eligible (225).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (229) that was higher than that of eligible students in 1996 (216).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (229) that was higher than that of eligible students in 2000 (214).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (229) that was higher than that of eligible students in 2003 (225).

### *Grade 4 Achievement-Level Results by Free/Reduced-Price Lunch Eligibility*

- In Utah in 2005, 23 percent of students who were eligible for free/reduced-price lunch and 45 percent of those who were not eligible for this program performed at or above *Proficient*. These percentages were found to be significantly different from one another.
- For students in Utah in 2005 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (23 percent) was greater than the corresponding percentage for their counterparts around the nation (19 percent).
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (23 percent) was greater than the corresponding percentage (13 percent) for 1996.
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (23 percent) was greater than the corresponding percentage (12 percent) for 2000.
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (23 percent) was not significantly different from the corresponding percentage (20 percent) for 2003.

**Table 4-A**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by eligibility for free/reduced-price school lunch, grade 4 public schools: various years, 1996–2005**

| Eligibility status | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **Eligible** | | | | | | |
| 1996[1] Nation (public) | 34( 1.6)* | 207( 2.0)* | 59( 2.6)* | 41( 2.6)* | 8( 1.2)* | #( 0.3)* |
| Utah | 27( 2.0)* | 216( 1.8)* | 45( 2.7)* | 55( 2.7)* | 13( 1.8)* | 1(***) |
| 2000[1] Nation (public) | 35( 1.1)* | 210( 1.0)* | 54( 1.5)* | 46( 1.5)* | 9( 0.8)* | #( 0.1)* |
| Utah | 31( 2.0)* | 215( 2.0)* | 47( 3.1)* | 53( 3.1)* | 13( 1.7)* | 1( 0.4) |
| 2000 Nation (public) | 40( 1.6)* | 208( 0.9)* | 57( 1.5)* | 43( 1.5)* | 7( 0.8)* | #( 0.1)* |
| Utah | 32( 2.1) | 214( 2.2)* | 48( 2.8)* | 52( 2.8)* | 12( 1.7)* | 1( 0.5) |
| 2003 Nation (public) | 44( 0.5)* | 222( 0.3)* | 38( 0.5)* | 62( 0.5)* | 15( 0.3)* | 1( 0.1)* |
| Utah | 34( 1.8) | 225( 1.2)* | 33( 1.9)* | 67( 1.9)* | 20( 1.7) | 1( 0.4) |
| 2005 Nation (public) | 46( 0.3) | 225( 0.2) | 33( 0.3) | 67( 0.3) | 19( 0.3) | 1( 0.1) |
| Utah | 37( 1.4) | 229( 1.0) | 28( 1.5) | 72( 1.5) | 23( 1.9) | 2( 0.7) |
| **Not eligible** | | | | | | |
| 1996[1] Nation (public) | 52( 2.5) | 231( 1.1)* | 27( 1.8)* | 73( 1.8)* | 25( 1.4)* | 3( 0.6)* |
| Utah | 60( 2.4) | 231( 1.3)* | 25( 1.9)* | 75( 1.9)* | 27( 1.8)* | 2( 0.7)* |
| 2000[1] Nation (public) | 52( 2.4) | 236( 1.3)* | 21( 1.4)* | 79( 1.4)* | 33( 1.6)* | 4( 0.6)* |
| Utah | 64( 2.5) | 233( 1.1)* | 23( 1.5)* | 77( 1.5)* | 29( 1.6)* | 2( 0.4)* |
| 2000 Nation (public) | 49( 2.4) | 235( 1.2)* | 23( 1.7)* | 77( 1.7)* | 32( 1.7)* | 4( 0.5)* |
| Utah | 62( 2.7) | 233( 1.2)* | 22( 1.4)* | 78( 1.4)* | 28( 1.7)* | 2( 0.6)* |
| 2003 Nation (public) | 52( 0.5) | 244( 0.3)* | 12( 0.3)* | 88( 0.3)* | 45( 0.5)* | 6( 0.2)* |
| Utah | 65( 1.8) | 240( 0.8)* | 15( 1.2)* | 85( 1.2)* | 37( 1.6)* | 3( 0.6)* |
| 2005 Nation (public) | 52( 0.3) | 248( 0.2) | 10( 0.2) | 90( 0.2) | 50( 0.3) | 8( 0.2) |
| Utah | 59( 1.9) | 244( 0.9) | 11( 1.1) | 89( 1.1) | 45( 1.9) | 6( 0.8) |
| **Information not available** | | | | | | |
| 1996[1] Nation (public) | 13( 3.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 13( 2.8)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000[1] Nation (public) | 13( 2.4)* | 235( 2.3) | 23( 3.3) | 77( 3.3) | 35( 3.4) | 3( 0.9) |
| Utah | 6( 2.2) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2000 Nation (public) | 11( 2.1)* | 236( 2.3) | 22( 3.1) | 78( 3.1) | 35( 3.4) | 4( 0.9) |
| Utah | 7( 2.5) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2003 Nation (public) | 4( 0.3)* | 235( 1.5) | 23( 1.9) | 77( 1.9) | 34( 1.9) | 4( 0.5) |
| Utah | 1( 0.6) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 2( 0.2) | 237( 1.6) | 21( 1.8) | 79( 1.8) | 36( 2.2) | 5( 0.9) |
| Utah | 4( 1.8) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |

# Estimate rounds to zero.
‡ Reporting standards are not met.
* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
NOTE: The NAEP mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1996–2005 Mathematics Assessments.

## *Grade 8 Scale Score Results by Free/Reduced-Price Lunch Eligibility*

- In 2005, students in Utah eligible for free/reduced-price lunch had an average mathematics scale score of 268. This was lower than that of students in Utah not eligible for this program (284).
- In 2005, students who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 17 points. In 1996, the average score for students who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 12 points.
- Students in Utah eligible for free/reduced-price lunch had an average scale score (268) in 2005 that was higher than that of students in the nation who were eligible (261).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (268) that was not significantly different from that of eligible students in 1996 (268).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (268) that was higher than that of eligible students in 2000 (255).
- In Utah, students eligible for free/reduced-priced lunch had an average mathematics scale score in 2005 (268) that was not significantly different from that of eligible students in 2003 (266).

## *Grade 8 Achievement-Level Results by Free/Reduced-Price Lunch Eligibility*

- In Utah in 2005, 20 percent of students who were eligible for free/reduced-price lunch and 34 percent of those who were not eligible for this program performed at or above *Proficient*. These percentages were found to be significantly different from one another.
- For students in Utah in 2005 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (20 percent) was greater than the corresponding percentage for their counterparts around the nation (13 percent).
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (20 percent) was not significantly different from the corresponding percentage (17 percent) for 1996.
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (20 percent) was greater than the corresponding percentage (12 percent) for 2000.
- In Utah, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* for 2005 (20 percent) was not significantly different from the corresponding percentage (18 percent) for 2003.

**Table 4-B**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by eligibility for free/reduced-price school lunch, grade 8 public schools: various years, 1996–2005**

| Eligibility status | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **Eligible** | | | | | | |
| 1996[1] Nation (public) | 30( 1.5)* | 252( 1.5)* | 61( 1.8)* | 39( 1.8)* | 8( 1.1)* | 1( 0.3) |
| Utah | 20( 1.3)* | 268( 2.4) | 42( 3.2) | 58( 3.2) | 17( 2.0) | 1( 0.5) |
| 2000[1] Nation (public) | 28( 1.0)* | 255( 1.2)* | 56( 1.7)* | 44( 1.7)* | 10( 0.9)* | 1( 0.3) |
| Utah | 22( 1.3)* | 262( 2.0)* | 49( 2.9) | 51( 2.9) | 15( 1.8)* | 1( 0.7) |
| 2000 Nation (public) | 31( 1.3)* | 253( 1.2)* | 59( 1.3)* | 41( 1.3)* | 10( 0.8)* | 1( 0.2) |
| Utah | 24( 1.5)* | 255( 2.4)* | 55( 3.0)* | 45( 3.0)* | 12( 1.8)* | 1( 0.5) |
| 2003 Nation (public) | 36( 0.4)* | 258( 0.3)* | 53( 0.5)* | 47( 0.5)* | 11( 0.3)* | 1( 0.1)* |
| Utah | 27( 1.3)* | 266( 1.9) | 44( 2.6) | 56( 2.6) | 18( 1.9) | 2( 0.8) |
| 2005 Nation (public) | 39( 0.3) | 261( 0.2) | 49( 0.4) | 51( 0.4) | 13( 0.2) | 1( 0.1) |
| Utah | 31( 1.1) | 268( 1.4) | 42( 2.2) | 58( 2.2) | 20( 1.8) | 2( 0.5) |
| **Not eligible** | | | | | | |
| 1996[1] Nation (public) | 56( 2.6) | 279( 1.5)* | 29( 1.7)* | 71( 1.7)* | 29( 1.7)* | 5( 0.9)* |
| Utah | 70( 1.9) | 280( 1.0)* | 26( 1.5) | 74( 1.5) | 27( 1.3)* | 3( 0.5)* |
| 2000[1] Nation (public) | 55( 1.8) | 285( 1.1)* | 24( 1.0)* | 76( 1.0)* | 35( 1.5)* | 7( 0.8) |
| Utah | 67( 1.8) | 281( 1.0)* | 26( 1.3) | 74( 1.3) | 29( 1.3)* | 3( 0.6)* |
| 2000 Nation (public) | 54( 1.7)* | 283( 1.1)* | 26( 1.2)* | 74( 1.2)* | 34( 1.3)* | 7( 0.8) |
| Utah | 67( 1.9) | 280( 1.0)* | 26( 1.1) | 74( 1.1) | 29( 1.4)* | 3( 0.6)* |
| 2003 Nation (public) | 58( 0.6) | 287( 0.3)* | 22( 0.3) | 78( 0.3) | 37( 0.4)* | 7( 0.2)* |
| Utah | 70( 1.6) | 286( 1.0) | 22( 1.1) | 78( 1.1) | 36( 1.6) | 7( 1.0) |
| 2005 Nation (public) | 59( 0.3) | 288( 0.2) | 21( 0.2) | 79( 0.2) | 39( 0.3) | 8( 0.2) |
| Utah | 69( 1.1) | 284( 0.8) | 23( 1.1) | 77( 1.1) | 34( 1.2) | 6( 0.8) |
| **Information not available** | | | | | | |
| 1996[1] Nation (public) | 14( 3.1)* | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| Utah | 10( 1.7)* | 276( 3.6) | 33( 3.4) | 67( 3.4) | 24( 4.5) | 2( 1.1) |
| 2000[1] Nation (public) | 16( 2.1)* | 273( 2.1) | 37( 2.7) | 63( 2.7) | 26( 2.3) | 4( 1.0) |
| Utah | 10( 2.0)* | 269( 8.6) | 38( 7.4) | 62( 7.4) | 24( 5.7) | 5( 1.7) |
| 2000 Nation (public) | 15( 1.8)* | 271( 2.4) | 38( 2.9) | 62( 2.9) | 24( 2.3) | 4( 1.0) |
| Utah | 9( 1.8)* | 275( 5.3) | 35( 6.1) | 65( 6.1) | 27( 6.2) | 5( 1.7) |
| 2003 Nation (public) | 6( 0.4)* | 278( 1.3) | 32( 1.3) | 68( 1.3) | 29( 1.5) | 6( 0.6) |
| Utah | 4( 1.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |
| 2005 Nation (public) | 3( 0.3) | 277( 1.9) | 34( 2.0) | 66( 2.0) | 28( 2.2) | 6( 0.9) |
| Utah | #( 0.1) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) | ‡(‡) |

# Estimate rounds to zero.
‡ Reporting standards are not met.
* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
NOTE: The NAEP mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1996–2005 Mathematics Assessments.

## Parents' Highest Level of Education

Eighth-grade students who participated in the NAEP 2005 assessment were asked to indicate the highest level of education they thought their father and their mother had completed. Five response options–did not finish high school, graduated from high school, some education after high school, graduated from college, and "I don't know"–were offered. The highest level of education reported for either parent was used in the analysis of this question. Fourth-graders' replies to this question were not provided in NAEP reports because their responses in previous NAEP assessments were highly variable, and a large percentage of them chose the "I don't know" option.

### *Grade 8 Scale Score Results by Parents' Highest Level of Education*

- In 2005, students in Utah who reported that a parent had graduated from college had an average scale score that was higher than the average scores of students with a parent in any of the following education categories: did not finish high school, graduated from high school, and some education after high school.
- The average scale score was higher in 2005 than in 1992 for students in Utah who reported that a parent had graduated from college.
- The differences between the average scale scores in 2005 and 1992 for students in Utah who reported that a parent had some education after high school, or had graduated from high school, or had not finished high school were not significant.
- The differences between the average scale scores in 2005 and 2003 for students in Utah who reported that a parent had graduated from college, or had some education after high school, or had graduated from high school, or had not finished high school were not significant.

### *Grade 8 Achievement-Level Results by Parents' Highest Level of Education*

- In 2005, the percentage of students performing at or above *Proficient* in Utah who reported that a parent had graduated from college was higher than the percentage for students whose parents' highest level of education was in any of the following categories: did not finish high school, graduated from high school, and some education after high school.
- In 2005, the percentage of students performing at or above *Proficient* was higher than the percentage in 1992 for students reporting that a parent had graduated from college.
- In 2005, the percentage of students performing at or above *Proficient* was not found to be significantly different from the percentage in 1992 for students reporting that a parent had some education after high school, or had graduated from high school, or had not finished high school.
- In 2005, the percentage of students performing at or above *Proficient* was not found to be significantly different from the percentage in 2003 for students reporting that a parent had graduated from college, or had some education after high school, or had graduated from high school, or had not finished high school.

**Table 5**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by parents' highest level of education, grade 8 public schools: various years, 1992–2005**

| Highest level of education | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **not finished high school** | | | | | | |
| 1992[1] Nation (public) | 8( 0.6) | 249( 1.8)* | 66( 3.2)* | 34( 3.2)* | 6( 1.7)* | 1(***) |
| Utah | 3( 0.3)* | 255( 3.2) | 58( 7.1) | 42( 7.1) | 6( 3.2) | #(***) |
| 1996[1] Nation (public) | 8( 0.5) | 254( 1.9)* | 56( 2.7) | 44( 2.7) | 8( 2.1) | 1(***) |
| Utah | 3( 0.4)* | 254( 3.3) | 60( 8.0) | 40( 8.0) | 6( 4.2) | #(***) |
| 2000[1] Nation (public) | 7( 0.3) | 255( 1.4)* | 55( 2.3) | 45( 2.3) | 8( 1.4) | 1( 0.3) |
| Utah | 4( 0.5) | 248( 4.2) | 64( 6.0) | 36( 6.0) | 7( 2.8) | #(***) |
| 2000 Nation (public) | 8( 0.4) | 253( 1.4)* | 57( 2.5) | 43( 2.5) | 7( 1.3)* | #( 0.2) |
| Utah | 4( 0.4) | 245( 3.8)* | 66( 5.4) | 34( 5.4) | 6( 3.9) | #(***) |
| 2003 Nation (public) | 7( 0.1)* | 256( 0.6)* | 56( 0.9)* | 44( 0.9)* | 9( 0.6)* | 1( 0.2) |
| Utah | 5( 0.4) | 253( 3.7) | 61( 5.9) | 39( 5.9) | 9( 4.1) | #(***) |
| 2005 Nation (public) | 8( 0.1) | 259( 0.5) | 52( 0.8) | 48( 0.8) | 11( 0.4) | 1( 0.1) |
| Utah | 4( 0.4) | 259( 2.8) | 50( 5.0) | 50( 5.0) | 9( 2.8) | #(***) |
| **graduated from high school** | | | | | | |
| 1992[1] Nation (public) | 25( 0.8)* | 257( 1.3)* | 55( 2.1)* | 45( 2.1)* | 10( 1.1)* | 1( 0.4) |
| Utah | 15( 0.8) | 259( 1.8) | 52( 3.1) | 48( 3.1) | 10( 1.9) | #(***) |
| 1996[1] Nation (public) | 23( 0.8)* | 260( 1.3)* | 50( 2.1)* | 50( 2.1)* | 12( 1.3)* | 1( 0.5) |
| Utah | 17( 0.8)* | 264( 1.7) | 46( 2.8) | 54( 2.8) | 9( 1.4) | 1( 0.5) |
| 2000[1] Nation (public) | 21( 0.6)* | 263( 1.2)* | 47( 1.3)* | 53( 1.3)* | 16( 1.4) | 1( 0.4) |
| Utah | 16( 0.8) | 263( 2.8) | 47( 3.2) | 53( 3.2) | 13( 2.2) | 1(***) |
| 2000 Nation (public) | 21( 0.6)* | 260( 1.1)* | 49( 1.5)* | 51( 1.5)* | 15( 1.1) | 1( 0.4) |
| Utah | 17( 0.9)* | 261( 2.3) | 48( 2.8) | 52( 2.8) | 11( 1.6) | #(***) |
| 2003 Nation (public) | 18( 0.2) | 267( 0.4) | 42( 0.6) | 58( 0.6) | 16( 0.5) | 2( 0.2) |
| Utah | 13( 0.7) | 265( 1.7) | 44( 2.8) | 56( 2.8) | 12( 2.2) | 1(***) |
| 2005 Nation (public) | 18( 0.1) | 267( 0.3) | 42( 0.4) | 58( 0.4) | 17( 0.4) | 2( 0.1) |
| Utah | 14( 0.7) | 262( 1.5) | 48( 3.2) | 52( 3.2) | 12( 2.1) | #(***) |
| **some education after high school** | | | | | | |
| 1992[1] Nation (public) | 18( 0.6) | 270( 1.2)* | 40( 1.8)* | 60( 1.8)* | 20( 1.4)* | 3( 0.7) |
| Utah | 22( 1.0)* | 279( 1.2) | 27( 2.3) | 73( 2.3) | 24( 2.2) | 2( 0.7) |
| 1996[1] Nation (public) | 19( 0.8) | 279( 1.5) | 29( 2.1) | 71( 2.1) | 26( 2.0) | 4( 0.8) |
| Utah | 18( 0.8) | 281( 1.3) | 23( 2.4) | 77( 2.4) | 25( 2.3) | 2( 0.8) |
| 2000[1] Nation (public) | 18( 0.6) | 279( 1.0) | 28( 1.6) | 72( 1.6) | 27( 1.6) | 3( 0.9) |
| Utah | 18( 1.1) | 280( 1.8) | 27( 3.2) | 73( 3.2) | 28( 2.4) | 3( 1.1) |
| 2000 Nation (public) | 18( 0.6) | 277( 1.1)* | 30( 1.7) | 70( 1.7) | 26( 1.3) | 3( 0.6) |
| Utah | 18( 1.1) | 277( 2.0) | 30( 2.8) | 70( 2.8) | 26( 2.5) | 3( 1.1) |
| 2003 Nation (public) | 18( 0.2) | 280( 0.4) | 27( 0.5) | 73( 0.5) | 28( 0.5) | 4( 0.3) |
| Utah | 16( 0.7) | 281( 1.5) | 27( 2.1) | 73( 2.1) | 28( 2.5) | 4( 1.0) |
| 2005 Nation (public) | 18( 0.1) | 280( 0.3) | 27( 0.5) | 73( 0.5) | 28( 0.4) | 4( 0.2) |
| Utah | 17( 0.8) | 280( 1.5) | 26( 2.4) | 74( 2.4) | 27( 2.5) | 3( 1.6) |
| **graduated from college** | | | | | | |
| 1992[1] Nation (public) | 40( 1.4)* | 279( 1.4)* | 30( 1.5)* | 70( 1.5)* | 31( 1.9)* | 5( 0.8)* |
| Utah | 53( 1.3) | 280( 1.0)* | 26( 1.4)* | 74( 1.4)* | 28( 1.5)* | 3( 0.6)* |
| 1996[1] Nation (public) | 40( 1.4)* | 281( 1.8)* | 28( 1.6)* | 72( 1.6)* | 34( 2.2)* | 7( 1.2) |
| Utah | 53( 1.3) | 284( 1.1)* | 23( 1.5) | 77( 1.5) | 33( 1.9)* | 4( 0.7)* |
| 2000[1] Nation (public) | 43( 1.0) | 286( 1.1)* | 24( 1.0) | 76( 1.0) | 39( 1.5) | 9( 0.9) |
| Utah | 51( 1.2) | 285( 1.3)* | 22( 1.5) | 78( 1.5) | 34( 1.9)* | 5( 0.7)* |
| 2000 Nation (public) | 41( 1.0)* | 285( 1.2)* | 25( 1.2)* | 75( 1.2)* | 38( 1.5) | 9( 0.9) |
| Utah | 50( 1.2)* | 284( 1.2)* | 23( 1.6) | 77( 1.6) | 34( 1.6)* | 4( 0.7)* |
| 2003 Nation (public) | 45( 0.3) | 287( 0.4)* | 23( 0.4)* | 77( 0.4)* | 39( 0.4)* | 8( 0.3)* |
| Utah | 55( 1.2) | 292( 1.1) | 17( 1.2) | 83( 1.2) | 43( 1.7) | 9( 1.1) |
| 2005 Nation (public) | 45( 0.2) | 289( 0.3) | 22( 0.2) | 78( 0.2) | 41( 0.3) | 10( 0.2) |
| Utah | 54( 1.0) | 289( 0.9) | 19( 1.2) | 81( 1.2) | 40( 1.3) | 7( 0.8) |

See notes at end of table.

**Table 5**

**The Nation's Report Card 2005 State Assessment**

**Average mathematics scale scores and percentage of students at or above each achievement level, by parents' highest level of education, grade 8 public schools: various years, 1992–2005—Continued**

| Highest level of education | Percent of students | Average scale score | Below *Basic* | At or above *Basic* | At or above *Proficient* | At *Advanced* |
|---|---|---|---|---|---|---|
| **Unknown** | | | | | | |
| 1992[1] Nation (public) | 9( 0.5)* | 251( 1.7)* | 62( 2.5)* | 38( 2.5)* | 9( 1.4)* | #(***) |
| Utah | 7( 0.5)* | 259( 2.7) | 54( 5.6) | 46( 5.6) | 12( 2.9) | 1(***) |
| 1996[1] Nation (public) | 11( 0.6) | 253( 1.7)* | 59( 2.2)* | 41( 2.2)* | 10( 1.5) | 1( 0.3) |
| Utah | 9( 0.6) | 260( 2.9) | 50( 4.3) | 50( 4.3) | 11( 2.9) | 1(***) |
| 2000[1] Nation (public) | 11( 0.4) | 255( 1.1)* | 55( 2.1) | 45( 2.1) | 11( 1.2) | 1( 0.4) |
| Utah | 11( 1.0) | 255( 3.9) | 53( 3.4) | 47( 3.4) | 10( 2.4) | 1( 0.7) |
| 2000 Nation (public) | 12( 0.5) | 253( 1.4)* | 59( 1.6)* | 41( 1.6)* | 9( 0.9)* | 1( 0.3) |
| Utah | 12( 0.8) | 254( 2.7) | 53( 3.6) | 47( 3.6) | 8( 1.6) | 1(***) |
| 2003 Nation (public) | 11( 0.1) | 258( 0.5)* | 53( 0.7)* | 47( 0.7)* | 12( 0.4) | 1( 0.2) |
| Utah | 11( 0.7) | 258( 2.4) | 52( 3.5) | 48( 3.5) | 11( 2.4) | 1( 0.7) |
| 2005 Nation (public) | 11( 0.1) | 260( 0.4) | 51( 0.6) | 49( 0.6) | 13( 0.3) | 1( 0.1) |
| Utah | 10( 0.5) | 260( 2.5) | 48( 3.5) | 52( 3.5) | 12( 2.2) | 1(***) |

# Estimate rounds to zero.
* Value is significantly different from the value for the same jurisdiction in 2005.
[1] Accommodations were not permitted for this assessment.
NOTE: The NAEP mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scale: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. All differences were tested for statistical significance at the 0.05 level using unrounded numbers. Detail may not sum to totals because of rounding. Performance comparisons may be affected by differences in exclusion rates for students with disabilities and English language learners in the NAEP samples and by changes in sample sizes.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Mathematics Assessments.

## What is the Nation's Report Card?

The Nation's Report Card, the National Assessment of Educational Progress (NAEP), is a nationally representative and continuing assessment of what America's students know and can do in various subject areas. Since 1969, assessments have been conducted periodically in reading, mathematics, science, writing, history, geography, and other fields. By making objective information on student performance available to policymakers at the national, state, and local levels, NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement is collected under this program. NAEP guarantees the privacy of individual students and their families.

NAEP is a congressionally mandated project of the National Center for Education Statistics within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible, by law, for carrying out the NAEP project through competitive awards to qualified organizations.

In 1988, Congress established the National Assessment Governing Board (NAGB) to oversee and set policy for NAEP. The Board is responsible for selecting the subject areas to be assessed; setting appropriate student achievement levels; developing assessment objectives and test specifications; developing a process for the review of the assessment; designing the assessment methodology; developing guidelines for reporting and disseminating NAEP results; developing standards and procedures for interstate, regional, and national comparisons; determining the appropriateness of all assessment items and ensuring the assessment items are free from bias and are secular, neutral, and non-ideological; taking actions to improve the form, content, use, and reporting of results of the National Assessment; and planning and executing the initial public release of NAEP reports.